

# Wetland Rapid Assessment

*Testing: Summer 2004; Analysis: Fall 2004*

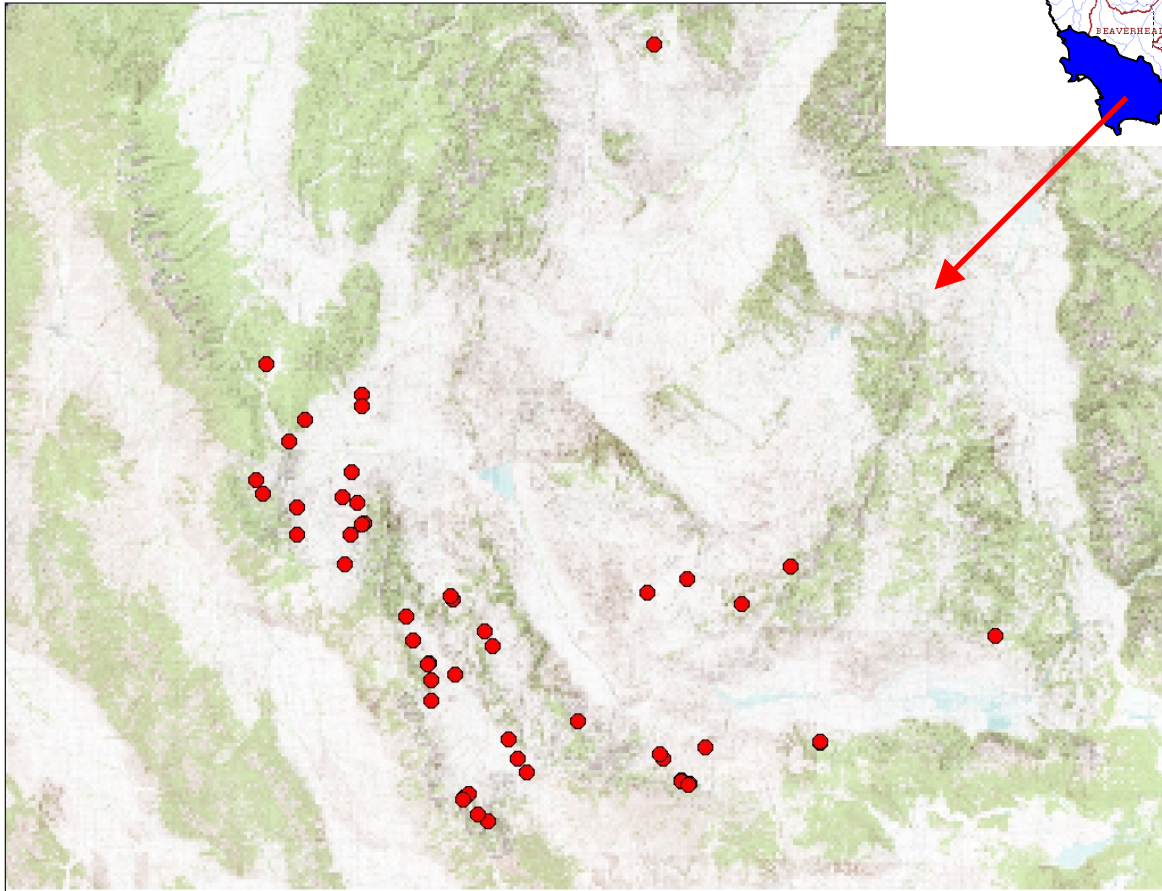
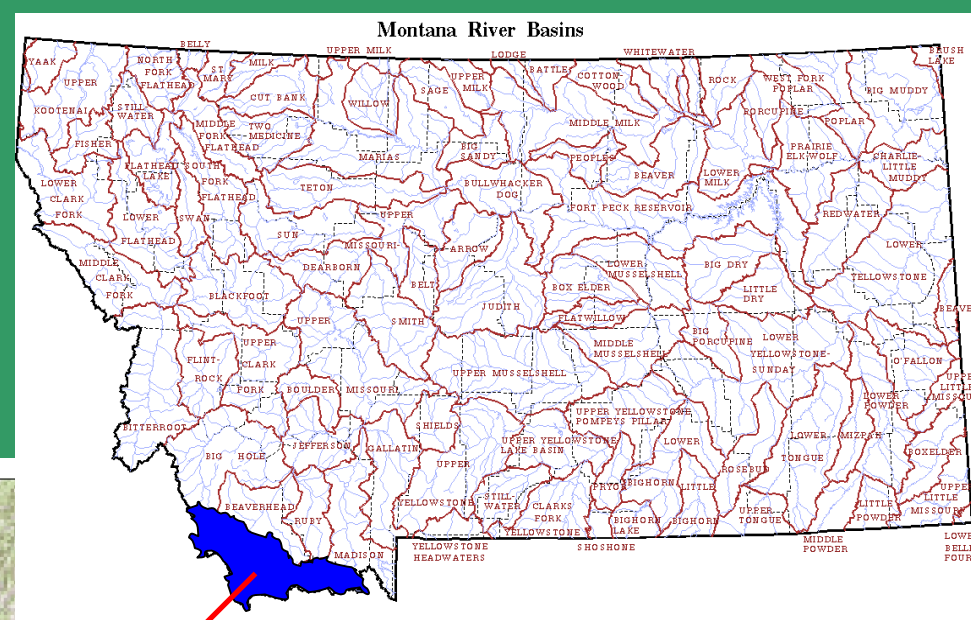


Presentation created by Erin Fehringer  
and presented by Erin Farris

## Montana River Basins



- 31 Riverine Sites
- 21 Beaver Pond Sites



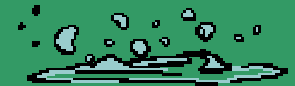
# DEQ Rapid Assessment Form

## Six Sections:

- Site Characterization
- Water Quality
- Hydrogeomorphology
- Buffer Condition
- Vegetation Condition
- Restorability

# Site Characterization

- Site name & location
- Wetland type & general description
- Site map
- Beaver activity
- Wildlife & amphibian observations



# Lodgepole Pine Forest



# Water Quality



**Upper Nicholia Creek: Average score = 0.85**



**Lower Nicholia Creek: Average score = 0.43**

# Hydrogeomorphology



**NF Everson Creek: Average score = 0.82**



**Stream Bank Stability**



**Surveyor Creek: Average score = 0.18**

# Buffer Condition



**WF Blacktail Creek: Average score = 0.6**



Saline seep

# Vegetation Condition



**EF Blacktail Creek: Average score = 0.73**



Large, mature willows



New saplings



- Multiple age classes of willows
- Regeneration occurring



**Little Sage Creek: Average score = 0.04**



# Restorability



**MF Price Creek: Category 1**



**Deadman Creek: Category 3**

# Beaver Ponds



# Beaver Effects on Wetlands

- *Sedimentation*: sediment will build up behind beaver dams



- *Flooding of willows*: flooding causes some willow branches to die

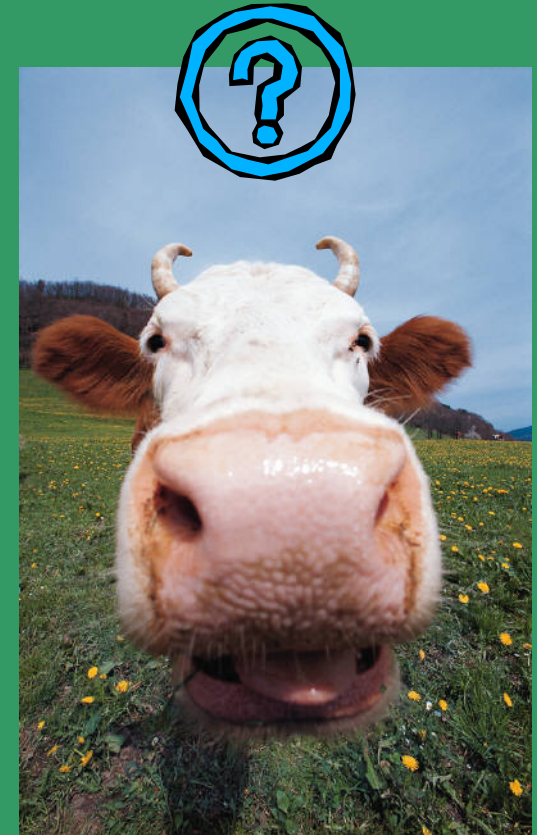


- *Algae*: sediment build-up sometimes fosters algal growth



# Scoring Dilemma

- It is difficult to discern the cause of impacts
- Beaver ponds are still riverine wetlands
- Restorability
- Age of beaver ponds often affect the appearance of the site



# Results

- Riverine average score = 0.57
- Beaver average score = 0.61

## Beaver sites scored higher overall

- Riverine score range = 0.69
- Beaver score range = 0.57

## Riverine sites had a larger range of scores

# Conclusions

- Beaver ponds are difficult sites to assess using Rapid Assessment:

It may be most useful to assess riverine sites on the same stream reach as beaver ponds are located.

- Beavers seem to occupy only the higher quality wetlands:

We may conclude that the presence of beaver ponds are indeed an indicator of high quality wetland condition.



# Testing the Form with Bryce's Crew

- **Form Friendliness**
  - **7 member Crew**
    - **Used form on Depressional Sites**



# MDT and NRCS Wetland Assessment Forms

## MDT

- “Condition” section is most comparable to DEQ form
- Much of the form is targeted towards assessing functions and values for mitigation purposes

**In conclusion, possibly the DEQ form would be most useful as a “Condition” module and the MDT form as a “Mitigation” module.**

## NRCS

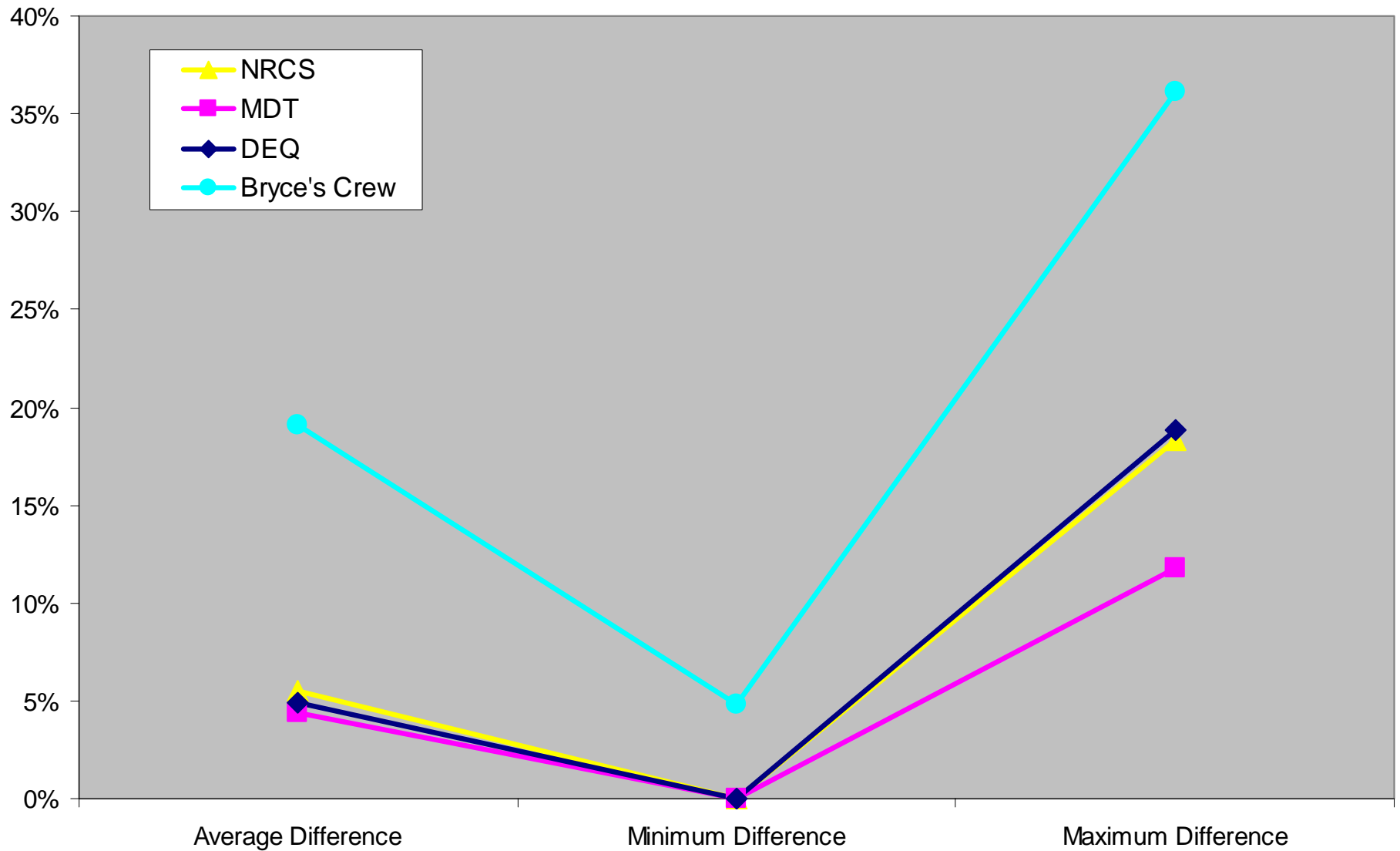
- Some questions are more in-depth or worded better
- We provided some useful suggestions to NRCS, and they have used these suggestions to improve the form.

**In Summary, We may use the noxious weeds and invasive plant species questions, as well as other questions, in the DEQ form.**

# Data Precision

|              | Average Difference | Minimum Difference | Maximum Difference |
|--------------|--------------------|--------------------|--------------------|
| DEQ          | 5.00%              | 0%                 | 19.00%             |
| MDT          | 5.00%              | 0%                 | 11.00%             |
| NRCS         | 5.00%              | 0%                 | 18.00%             |
| Bryce's Crew | 19.00%             | 5.00%              | 36.00%             |

# DATA PRECISION



# Conclusions

- **With about a week's training, interns and volunteers should be able to collect useful, accurate and precise Rapid Assessment data**
- **We also hope to provide educational materials**
- **Training should occur throughout the season, encompassing the assessment of high quality sites**
- **Through a collective effort, we hope to improve and reform the DEQ form this winter**
- **Testing will continue next summer in the Gallatin Valley**